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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,386	12/29/2003	Sang Yub Han	10125/4135	8162

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Brinks Hofer Gilson & Lione  
Post Office Box 10395  
Chicago, IL 60610

EXAMINER
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SCHECHTER, ANDREW M

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/748,386

**Applicant(s)**

HAN, SANG YUB

**Examiner**

Andrew Schechter

**Art Unit**

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Response to Arguments***

2. Applicant's arguments filed 18 July 2005 have been fully considered but they are not persuasive.

The applicant states [pp. 5-6] that "the Examiner acknowledges that DBEF sheets satisfy the language" of claim 9. This is incorrect. The examiner assumed this to be the case for examining purposes, because it was not possible to understand the scope of the claim as written. The applicant argues that if the wording is distinct enough to identify a specific material as being within the scope of the claim, the scope of the claim is clear. This is not persuasive, since it remains unclear what else might or might not be within the scope of the claim. The examiner respectfully requests the applicant to answer the questions posed by the examiner in the previous rejection, and clarify the scope of the claim. For instance, does the applicant mean that the optical sheet has different thermal expansion coefficients along different axes?

The applicant argues [p. 6] that *Kim '417* is ambiguous as to whether the securing points are "close" to the corners since there are no dimensions and the drawings are assumed not to be to scale. This is not persuasive. The claim does not

define how close is "close", so it is a relative term [see MPEP 2173.05(b)]; it is not considered by the examiner to be indefinite, since the examiner believes that one of ordinary skill would be apprised of the scope of the claim. To the examiner, the disclosure of *Kim '417* appears to be within that scope; should the applicants maintain their assertion that it is not, it would raise the question of whether the claim's scope was unclear under 35 U.S.C. 112, 2<sup>nd</sup> paragraph.

The applicant argues [p. 6-7] that *Kim '396* is not anticipatory; this is not persuasive, since all the claimed elements are disclosed by *Kim '396* as previously set forth. The applicant argues [p. 7] that *Kim '396*'s configuration with positioners at each of the four corners is not the configuration of claim 1. This is not persuasive. Claim 1 recites three securing points explicitly, but using the open-ended transitional phrase "comprising", which allows the device to have a fourth securing point and still be within the scope of the claim.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites "the optical sheet has a partially different thermal expansion coefficient". Different than what? What does "partially different" mean? Is it meant to

be “different thermal expansion coefficients along different axes”? For examining purposes it is assumed to refer to the thermal properties of DBEF films discussed by the applicant in the specification. Clarification would be appreciated.

5. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant has amended claim 1 to delete the language “a first side” and “a second side” and replace it with “a first diagonal line” and “a second diagonal line”, although the claim retains the phrase “opposing the first side of the optical sheet” which now lacks a proper antecedent basis. The applicant then argues [p. 6] that the claim recites “a first securing point close to one corner of a first side”, etc., as if the amendment had not been made; it is therefore not clear whether the deletions were intended. Furthermore, the claim as currently written does not make sense, since it is unclear how the diagonal line would be opposing any side of the sheet, and the second and third securing points on a second side would not both be near a single diagonal having a low thermal expansion coefficient.

For examining purposes, it is assumed that the claim was instead amended (from its original text) by adding the limitation “wherein the corners of the first and third securing points are joined by a diagonal of the optical sheet having a low thermal expansion coefficient and the corner of the second securing point is adjacent to a diagonal of the optical sheet having a high thermal expansion coefficient”. The

examiner believes this to have been the intent of the applicant. The examiner respectfully requests the applicant to review and clarify the language of claim 1.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kim*, U.S. Patent No. 6,175,396 in view of *Hara*, U.S. Patent No. 6,661,482 in view of *Lien et al.*, U.S. Patent No. 5,309,264, *Koike et al.*, U.S. Patent No. 5,745,206, and *Kim et al.*, U.S. Patent No. 6,005,650.

*Kim '396* discloses [see Figs. 1 and 11, for instance] a liquid crystal display module comprising a main support [1] and an optical sheet [3] secured to the main support through a first securing point [600] close to one corner of a first side of the optical sheet, and secured to the main support through a second and third securing points close to corners of a second side of the optical sheet opposing the first side of the optical sheet [col. 11, lines 20-26 discloses a positioner near each corner].

*Kim '396* does not disclose high and low thermal expansion coefficients of the optical sheet being along the relevant diagonals, the limitation which the examiner has assumed was intended by the applicant. *Hara* discloses a DBEF plate [just like the one discussed in the applicant's specification, see paragraph 0027] with the axes of the

DBEF plate matching the axes of the polarizer [col. 8, lines 12-33]. It would have been obvious to one of ordinary skill in the art at the time of the invention to use such a DBEF sheet as the optical sheet in *Kim* '396, motivated by the desire to provide properly polarized light to the LCD and by *Hara*'s teaching that it increases the light utilization efficiency compared to using a normal polarizer alone [col. 8, lines 12-33].

*Kim* '396 in view of *Hara* discloses that the axes of the DBEF plate, with their high and low thermal expansion coefficients [characteristic of the plate, as discussed by the applicant], are along the axes of the polarizing sheet (which could be applied with the DBEF sheet as *Hara* does or separately). However, they do not disclose that the axes of the polarizing sheet are along the diagonals of the device.

The examiner takes official notice that is well-known and conventional to have the axes of the polarizing sheet along the diagonals of the device, as evidenced by *Lien* [Fig. 2, col. 4, lines 37-47], *Koike* [Fig. 1, col. 5, lines 62-67], and *Kim* [Fig. 2, col. 6, lines 37-49]. It would have been obvious to one of ordinary skill in the art at the time of the invention to do so in the above device, motivated by the specific reasons given by the individual references and also by it being a conventional arrangement of these axes, which means it is well-understood, manufacturing processes for producing such arrangements are available, etc.

Note: since *Kim* '396 discloses securing points at each corner, a trivial renumbering of these points will cause them to align properly with the high and low thermal expansion diagonals. Also, since it is a rectangle not a square, the 45° axes will not line up exactly with the diagonals; this is irrelevant, since the device above (just

as in the applicants' device) will still have high and low thermal expansion coefficients along the diagonals as claimed.

Claim 1 is therefore unpatentable.

*Kim '396* discloses protrusions [600, etc.], so claim 2 is also unpatentable. There are holes [3a] and ears, so claims 3 and 4 are also unpatentable. The optical sheet includes a DBEF film with the "partially different thermal expansion coefficient", so claims 9 and 10 are also unpatentable.

8. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kim '396*, *Hara*, *Lien*, *Koike*, and *Kim '650* as applied above, and further in view of *An et al.*, U.S. Patent No. 6,392,724.

The above device does not disclose a guide panel with holes for the protrusions. *An* discloses [see Fig. 4] a guide panel [150] having holes [151] into which the analogous protrusions [172] are inserted. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a guide panel with such holes, motivated by the desire to secure the optical sheets and by *An's* teaching that with this hole, the protrusion is not affected by the panel guide (so, for instance, all the pieces fit together nicely) [col. 6, lines 45-48]. Claims 5 and 6 are therefore unpatentable.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Kim '396*, *Hara*, *Lien*, *Koike*, and *Kim '650* as applied above, and further in view of *Kim*, U.S. Patent No. 6,847,417.

*Kim '396* discloses a liquid crystal display panel [4] supported by the main support; and a light guide plate [2] supported by the main support at a lower portion of



the optical sheet. *Kim '396* does not disclose a reflective sheet as recited. *Kim '417* does disclose a reflective sheet [360] in an analogous position, and it would have been obvious to one of ordinary skill in the art at the time of the invention to use it in the device of *Kim '396*, motivated by the desire to maximize the efficiency of light usage and provide more light to the LCD panel. Claim 7 is therefore unpatentable.

10. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kim '396*, *Hara*, *Lien*, *Koike*, and *Kim '650* as applied above, and further in view of *Cho*, U.S. Patent No. 6,580,477.

*Kim '396* discloses that the positioners can be installed "near the corner of a mold frame" [col. 11, lines 20-26], but does not explicitly disclose being less than 1/10 of the entire length from the corner. Thus, the ranges "near the corner" and "less than 1/10 of the entire length from the corner" are overlapping ranges, in which situation a *prima facie* case of obviousness exists. Further, *Cho* discloses having such holes at the corners [Fig. 4]. It would have been obvious to one of ordinary skill in the art at the time of the invention to place them within 1/10 of the entire length from the corners, motivated by the example of *Cho* that this satisfactorily secures such optical sheets. Claims 11 and 12 are therefore unpatentable.

#### ***Allowable Subject Matter***

11. Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Art Unit: 2871

12. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose the device of claim 8, in particular the limitation suggested by the examiner in claim 1 relating to the diagonals, and the limitation of claim 8 that the number of securing points on the two sides are different. *Kim '417* discloses different numbers of securing points, but it appears they are that way for mechanical reasons unrelated to the thermal expansion parameters of the optical sheets, and it would not have been obvious to one of ordinary skill in the art at the time of the invention to align the low thermal expansion diagonal with two securing points and the high diagonal with one securing point, absent the teaching of the present specification.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

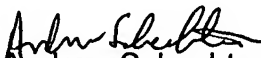
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (571) 272-2302. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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1 October 2005